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| EXAMINER |
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2124

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/775,837

Applicant(s)

GOTO ET AL.

Examiner

Lawrence Shrader

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of Applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d) filed on February 1, 2001.

### *Information Disclosure Statement*

2. The Information Disclosure Statement filed on February 1, 2001 is acknowledged.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 – 6; 7, 11; 15 – 17; 20, 21, 23 – 26; 27, 28; and 33 – 36 are rejected under 35 U.S.C. 102(e) as being anticipated by McGuire et al., U.S. Patent 6,493,871 (hereinafter referred to as McGuire).

A control program is interpreted as a software program or package.

**In regard to claim 1:**

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McGuire discloses a system for updating a software program comprising:

*a stored control program unit;*

McGuire discloses a client that stores and executes the software programs (e.g., see Figure 2).

*a maintenance management server coupled with the stored control program unit via a public network; wherein when the maintenance management server sends an instruction to update the control program to the stored control program unit, the maintenance management server sends authentication data to the stored control program unit through the public network; and*

McGuire discloses a server coupled with a client that stores and executes the software package (the program unit) via a network (e.g., see Figure 2), which may be the Internet (a public network, column 7, lines 21 – 23). The update server sends a setup program (instructions to update) to the program unit, which determines which files need to be updated (column 7, lines 228 – 56) with authentication (column 8, lines 15 – 19).

*a control program upload server coupled with the stored control program unit; wherein the control program upload server, after receiving and validating the authentication data via Internet, sends a control program update for processing by the stored control program unit.*

The download server (see Figure 2) then uploads to the client (stored program unit) the appropriate updates (column 7, lines 49 – 67) via Internet (column 7, lines 20 – 30. “Appropriate updates” in the broadest reasonable interpretation in view of specification means authentication data.

**In regard to claim 2, incorporating the rejection of claim 1:**

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*"...wherein the control program upload server maintains a key history file comprising a plurality of issued authentication keys, wherein said authentication data comprises one key of said plurality of issued authentication keys."*

McGuire discloses the use of Microsoft Corporation's Authenticode security system for authenticating software by maintaining authentication data (column 8, lines 15 – 19).

**In regard to claim 3, incorporating the rejection of claim 1:**

*"...wherein said stored control program unit comprises:  
a maintenance communication module for receiving said instruction and said authentication data from said maintenance management server,"*

McGuire discloses a communication module to receive instructions and authentication data from the update (management) server (e.g., see Figures 2 and 3).

*"a device download controller module for receiving the control program transferred from said control program upload server,"*

McGuire discloses a setup program (e.g., Figure 2, ref no. 82), which receives the program received from the upload server (Figure 2, ref no. 70).

*"and a program update module for storing said control program received by said device download controller module to a memory."*

McGuire discloses that the files are downloaded to update existing files (column 7, lines 49 – 56).

**In regard to claim 4, incorporating the rejection of claim 1.**

*"...wherein said stored control program unit, comprises:*

*a maintenance communication module for receiving said instruction and said authentication data from said maintenance management server, and a program file for receiving the control program transferred from said control program upload server."*

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McGuire discloses a setup program (e.g., Figure 2, ref no. 82), which receives the program received from the upload server (Figure 2, ref no. 70), and also discloses that files are downloaded by the client in order to update existing files (column 7, lines 49 – 56).

**In regard to claim 5, incorporating the rejection of claim 1:**

*“...a repeater unit, comprising one gate coupled with said stored control program unit through a Local Area Network, and another gate coupled with the Internet, wherein when commanded by said stored control program unit, said repeater unit transfers said control program from said control program upload server to said repeater unit.”*

The system disclosed by McGuire is capable of operating on a variety of network types, for example a WAN or the Internet (column 7, lines 21 – 23; see also Figure 2). It is well known in the art that gates and repeaters are integrally inherent to those types of network systems in order to transfer programs from one device to another connected by said network.

**In regard to claim 6, incorporating the rejection of claim 5:**

*“...wherein said repeater unit only transfers said control program from said control program upload server, when said control program is not stored in said repeater unit.”*

The system disclosed by McGuire is capable of operating on a variety of network types, for example a WAN or the Internet (column 7, lines 21 – 23; see also Figure 2). It is well known in the art that repeaters are integrally inherent to those types of network systems in order to transfer programs by passing through data from one device to another connected by said network. The pass through function implies that the data must come from the upload server.

**In regard to claim 7:**

*“sending an update command from a maintenance server at a third location to said computer system via a first communications network, said update command comprising at least one instruction for said computer system to get said update control program from said update server;”*

McGuire discloses an update server (maintenance server) at a third location via a communications network, the maintenance server issuing a setup package with an update command to get an update program (see Figure; column 7, lines 24 – 56).

*“executing said command by said computer system;”*

Client computer executes the command (see Figures 2 and 3; column 7, lines 24 – 56).

*“receiving said update control program by said computer system from said update server via a second communications network, including the Internet;”*

The update program comes from an update server via a network that may include the Internet (column 7, lines 21 – 23).

*“updating said control program with said update control program.”*

See column 7, lines 49 – 56 of McGuire for updating of the software program.

**In regard to claim 11, incorporating the rejection of claim 7:**

*“...sending authentication data from said maintenance server to said computer system; and using said authentication data to establish a connection between said computer system and said update server.”*

McGuire discloses the use of Microsoft Corporation's Authenticode security system for authenticating software by maintaining authentication data (column 8, lines 15 – 19).

**In regard to claim 15:**

*A storage device maintenance method for updating a control program stored by a device controller of a storage system, said method comprising:*

*receiving information, comprising authentication data, by said storage system related to updating said control program via a first communication connection;*

McGuire discloses a server coupled with a client that stores and executes the software package (the program unit) via a network (e.g., see Figure 2), which may be the Internet (a public network, column 7, lines 21 – 23). The update server sends a setup program (instructions to update) to the program unit, which determines which files need to be updated (column 7, lines 228 – 56) with authentication (column 8, lines 15 – 19).

*sending a request, comprising said authentication data, for an updated control program to an upload server via a second communication connection, comprising an Internet connection;*

McGuire discloses a request sent to the upload server via a second communication connection (e.g., see Figure 2, ref No. 90).

*receiving said updated control program from said upload server via said second communication connection; and*

McGuire discloses receipt of updated files from the upload server via the second communication connection (e.g., see Figure 2, ref No. 96).

*using said updated control program to update said control program.*

McGuire discloses the updating of the software program using the updated software (column 4, lines 33 – 37).

**In regard to claim 16, incorporating the rejection of claim 15:**



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*“...wherein said authentication data comprises upload server password and login identifier.”*

McGuire discloses the use of Microsoft Corporation's Authenticode security system for authenticating software by maintaining authentication data (column 8, lines 15 – 19).

**In regard to claim 17, incorporating the rejection of claim 15:**

*“...wherein said request further comprises control program version information.”*

McGuire discloses that version information is considered in the software updating (column 4, lines 21 – 27).

**In regard to claim 20:**

*A maintenance system for updating a control program of a device controller, said control program stored at a computer center serviced by said maintenance center, said system comprising:*

*a storage system for storing an authentication key for accessing a development center, comprising an upload server, and a file location having a location of an updated control program on said upload server, wherein said authentication key and said file location are received from said upload server;*

McGuire discloses a storage system having authentication keys (Authenticode system, column 8, lines 10 – 19), an upload server (e.g., Figure 2, ref. no. 70) with updated software programs (e.g., Figure 2, ref. no. 92).

*a processor for sending information, comprising an instruction, said file location and said authentication key, to said computer center via a public network, said instruction requesting an updated control program from said upload server;*

McGuire discloses a server coupled with a client that stores and executes the software package (the program unit) via a network (e.g., see Figure 2), which may be the Internet (a public network, column 7, lines 21 – 23). The update server sends a setup program (instructions

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to update) to the program unit, which determines which files need to be updated (column 7, lines 228 – 56) with authentication (column 8, lines 15 – 19).

*an update feedback module for receiving a result of executing said instruction by said computer center.*

McGuire discloses a setup program in the client that receives the result (a set-up package) of executing the instruction to update (e.g., Figure 3; column 4, lines 13 – 37).

**In regard to claim 21**, incorporating the rejection of claim 20:

*“...an input module for receiving a user request, comprising, said instruction.”*

The user requests an update with an instruction to the update server (e.g., see Figure 12).

**In regard to claim 23**, incorporating the rejection of claim 20:

*“...wherein said result is displayed on a display screen, said result comprising an update result.”*

McGuire discloses the result of the update request displayed for the user's consent before installation (column 8, lines 31 – 34).

**In regard to claim 24**, incorporating the rejection of claim 20:

*“...wherein said result is further sent to a customer management center.”*

McGuire discloses the result of the update request displayed for the user's consent before installation (column 8, lines 31 – 34).

**In regard to claim 25**, incorporating the rejection of claim 24:

*“...wherein said result is sent from said customer management center to a user.”*

McGuire discloses the result of the update request displayed for the user's consent before installation (column 8, lines 31 – 34).

**In regard to claim 26**, incorporating the rejection of claim 25:

*“...wherein said result is displayed real-time to said user.”*

McGuire discloses the result of the update request displayed for the user's consent in real-time before installation (column 8, lines 31 – 34).

**In regard to claim 27** (a computer readable medium for storing code for updating a control program), it is rejected for the same corresponding reasons put forth in the rejection of claim 15 (a maintenance method for updating a control program).

**In regard to claim 28** (a computer readable medium for storing code for updating a control program), incorporating the rejection of claim 27, it is rejected for the same corresponding reasons put forth in the rejection of claim 15 (a maintenance method for updating a control program).

**In regard to claim 33** (a system for updating a control program), it is rejected for the same corresponding reasons put forth in the rejection of claim 15 (a maintenance method for updating a control program).

**In regard to claim 34** (maintenance system for updating a control program), it is rejected for the same corresponding reasons put forth in the rejection of claim 15 (a maintenance method for updating a control program).

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**In regard to claim 35** (a system for updating a control program), it is rejected for the same corresponding reasons put forth in the rejection of claim 15 (a maintenance method for updating a control program).

**In regard to claim 36** (a computer-readable data transmission medium containing a data structure for sending information), ), it is rejected for the same corresponding reasons put forth in the rejection of claim 1 (a system for updating a control program).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGuire et al., U.S. Patent 6,493,871 as applied to claim 7 above, and further in view of Hodges, U.S. Patent 6,636,940.

**In regard to claim 8**, incorporating the rejection of claim 7:

*“...wherein said control program is a control program of a device controller.”*

McGuire discloses an update program loaded from an update server, but does not disclose that the software program is a device controller. However, Hodges discloses a device control

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program that is a disk drive control program (column 3, lines 26 – 31). Therefore, it would have been obvious to one skilled in that art at the time the invention was made to combine the program updating as taught by McGuire with the installed disk controller software that is taught by Hodges, because the Hodges teaches that the control software may be loaded from a memory media (column 3, lines 29 – 31), which indicates that the program is downloadable from other sources providing the means to update the control program when desired.

**In regard to claim 9**, incorporating the rejection of claim 7:

*“...wherein said control program is a control program of a disk controller.”*

McGuire discloses an update program loaded from an update server, but does not disclose that the software program is a device controller. However, Hodges discloses a device control program that is a disk drive control program (column 3, lines 26 – 31). Therefore, it would have been obvious to one skilled in that art at the time the invention was made to combine the program updating as taught by McGuire with the installed disk controller software that is taught by Hodges, because the Hodges teaches that the control software may be loaded from a memory media (column 3, lines 29 – 31), which indicates that the program is downloadable from other sources providing the means to update the control program when desired.

**In regard to claim 10**, incorporating the rejection of claim 7:

*“...wherein said computer system comprises a download controller coupled with a device controller, and wherein said device controller comprises said control program, and said receiving further comprises:  
downloading said update control program from said update server by said download controller;”*

McGuire discloses an update program loaded from an update server, but does not disclose that the software program is a device controller. However, Hodges discloses a device control program that is a disk drive control program (column 3, lines 26 – 31). Therefore, it would have been obvious to one skilled in that art at the time the invention was made to combine the program updating as taught by McGuire with the installed disk controller software that is taught by Hodges, because the Hodges teaches that the control software may be loaded from a memory media (column 3, lines 29 – 31), which indicates that the program is downloadable from other sources providing the means to update the control program when desired.

*“sending said update control program from said download controller to said device controller.”*

McGuire discloses an update program loaded from an update server, but does not disclose that the software program is a device controller. However, Hodges discloses a device control program that is a disk drive control program (column 3, lines 26 – 31). Therefore, it would have been obvious to one skilled in that art at the time the invention was made to combine the program updating as taught by McGuire with the installed disk controller software that is taught by Hodges, because the Hodges teaches that the control software may be loaded from a memory media (column 3, lines 29 – 31), which indicates that the program is downloadable from other sources providing the means to update the control program when desired.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over McGuire et al., U.S. Patent 6,493,871 as applied to claim 7 above, and further in view of Itoh et al., U.S. Patent 6,330,611 (hereinafter referred to as Itoh).

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**In regard to claim 12, incorporating the rejection of claim 7:**

*“...wherein said executing said command comprises establishing a file transfer protocol (ftp) connection with said update server.”*

McGuire discloses an update program loaded from an update server, wherein the client computer executes the command (see Figures 2 and 3; column 7, lines 24 – 56), but does not explicitly disclose establishing a file transfer protocol with the update server. However, Itoh discloses the file transfer protocol (ftp) connection (column 6, lines 41 – 44) in order to update client control software (column 6, lines 49 – 51). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to combine the teaching of McGuire wherein a software update is loaded from a server over the Internet, with the well-known use of FTP as an Internet protocol, because the FTP protocol is specifically designed to download files from, or upload files to remote computer systems.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over McGuire et al., U.S. Patent 6,493,871 as applied to claim 7 above, and further in view of Parthasarathy et al., U.S. Patent 6,347,398 (hereinafter referred to as Parthasarathy).

**In regard to claim 13, incorporating the rejection of claim 7:**

*“...returning a status of the updating to said maintenance server.”*

McGuire discloses an update program loaded from an update server, wherein the client computer executes the command (see Figures 2 and 3; column 7, lines 24 – 56), but does not explicitly disclose returning a status of the updating to the maintenance server. However, Parthasarathy discloses returning an update status of a download operation (column 19, lines 53 – 55). Therefore, it would have been obvious to one skilled in the art at the time the invention

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was made to combine the teaching of McGuire wherein a software update is loaded from a server over the Internet, with returning an upgrade status as taught by Parthasarathy, because the combination provides a signal for controlling the download as indicated by Parthasarathy at column 19, line 62.

9. Claims 14; 18, 19; and 29 – 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGuire et al., U.S. Patent 6,493,871 in view of Murata et al., U.S. Patent 6,505,257 (hereinafter referred to as Murata).

**In regard to claim 14:**

*“A remote console system for maintaining a control program of a disk controller (DKC) of a plurality of disk controllers, said disk controller comprising a Service Processor (SVP), said remote console system comprising:  
a remote console download controller coupled with said SVP and disposed to:  
receiving a file transfer request from said SVP, said file comprising said control program;”*

McGuire discloses a remote console download controller, but does not disclose a service processor that sends a file request to the console. However, Murata discloses a disk controller comprised of a service processor communicating upgrade commands with a maintenance panel (e.g., Figures 1 and 12; column 6, lines 25 – 52) where the disk controller receives the download from the SVP. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the remote console downloading in the teaching of McGuire with the teaching of Murata having a disk controller program upgraded through an SVP from a maintenance panel, because the maintenance panel of Murata would be replaced by the remote console as taught by McGuire providing a remote upgrade capability.

*sending said file transfer request to an update server;*



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*receiving said file from said update server; and*

The download server (see Figure 2 of McGuire) uploads to the client (stored program unit) upon request the appropriate updates (column 7, lines 49 – 67).

*sending said file to said SVP.*

McGuire discloses a remote console download controller, but does not disclose sending the upgrade file to a service processor. However, Murata discloses a disk controller comprised of a service processor communicating upgrade commands with a maintenance panel (e.g., Figure 1; column 6, lines 25 – 52) where the disk controller receives the download from the SVP (See Figure 6, ref. No. 110; Figure 12, ref. No. 215). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the remote console downloading in the teaching of McGuire with the teaching of Murata having a disk controller program upgraded through an SVP from a maintenance panel, because the maintenance panel of Murata would be replaced by the remote console as taught by McGuire providing a remote upgrade capability.

**In regard to claim 18:**

*A storage system for maintaining a control program of a disk controller (DKC) comprising:*

*a first disk controller of a plurality of disk controllers, wherein said first disk controller receives information, comprising authentication data, related to updating said control program from a maintenance center via a public network;*

McGuire discloses a server coupled with a client that stores and executes the software package (the program unit) via a network (e.g., see Figure 2), which may be the Internet (a public network, column 7, lines 21 – 23). The update server sends a setup program (instructions

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to update) to the program unit, which determines which files need to be updated (column 7, lines 228 – 56) with authentication (column 8, lines 15 – 19), but does not disclose a disk controller receiving the information. However, Murata discloses disk controllers receiving update information from a maintenance center (e.g., Figure 1, column 6, lines 25 – 52). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the remote console downloading in the teaching of McGuire with the teaching of Murata having a disk controller program upgraded through an SVP from a maintenance panel, because the maintenance panel of Murata would be replaced by the remote console as taught by McGuire providing a remote upgrade capability for the disk controllers over a public network.

*a download controller responsive to said first device controller and coupled with said plurality of device controllers, wherein said download controller performs operations comprising:*

*sending a request, comprising said authentication data, for an updated control program to an update server via an Internet connection;*

*receiving said updated control program from said update server via said Internet connection; and*

*distributing said updated control program to said plurality of disk controllers.*

McGuire discloses a server coupled with a client that stores and executes the software package (the program unit) via a network (e.g., see Figure 2), which may be the Internet (a public network, column 7, lines 21 – 23). The update server sends a setup program (instructions to update) to the program unit, which determines which files need to be updated (column 7, lines 228 – 56) with authentication (column 8, lines 15 – 19), but does not disclose a disk controller receiving the information. However, Murata discloses a plurality of disk controllers receiving update information from a maintenance center (e.g., Figure 1, column 6, lines 25 – 52).

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Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the remote console downloading in the teaching of McGuire with the teaching of Murata having a disk controller program upgraded through an SVP from a maintenance panel, because the maintenance panel of Murata would be replaced by the remote console as taught by McGuire providing a remote upgrade capability for the disk controllers over a public network.

**In regard to claim 19, incorporating the rejection of claim 18:**

*"...wherein said public network is a network comprising a router, wherein said router is coupled with said maintenance center and said computer center."*

Official notice is taken that the Internet, which the McGuire invention implements, inherently contains routers, therefore, it would have been obvious to one skilled in the art at the time the invention was made to couple a router to the computer center and maintenance center to access the Internet.

**In regard to claim 29:**

*A storage device maintenance system for transferring an update to a control program used in a device storage system, comprising a plurality of disk controllers, from a control program upload server via an Internet connection, comprising:*

*a maintenance management server for sending an instruction to update the control program;*

*a specialized device controller of the plurality of device controllers for receiving the instruction from the maintenance management server through a public telephone network;*

*a remote console download controller coupled with the specialized device controller, the specialized disk controller processing the instruction and instructing the remote console download controller to download the update from the control program upload server via the Internet, wherein the update is stored in a first program file coupled with the remote console download controller; and*

*the plurality of disk controllers coupled with the remote console download controller for receiving the update from the first program file.*

McGuire discloses a server coupled with a client that stores and executes the software package (the program unit) via a network (e.g., see Figure 2), which may be the Internet (a public network, column 7, lines 21 – 23). The update server sends a setup program (instructions to update) to the program unit, which determines which files need to be updated (column 7, lines 228 – 56) with authentication (column 8, lines 15 – 19), but does not disclose a disk controller receiving the information. However, Murata discloses a plurality of specialized disk controllers receiving update information from a maintenance center (e.g., Figure 1, column 6, lines 25 – 52). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the remote console downloading in the teaching of McGuire with the teaching of Murata having a disk controller program upgraded through an SVP from a maintenance panel, because the maintenance panel of Murata would be replaced by the remote console as taught by McGuire providing a remote upgrade capability for the disk controllers over a public network.

**In regard to claim 30, incorporating the rejection of claim 29:**

*“...wherein a disk controller of the plurality of disk controllers, comprises a DKC download controller, a program update controller, and a second program file.”*

McGuire discloses a server coupled with a client that stores and executes the software package (the program unit) via a network (e.g., see Figure 2), which may be the Internet (a public network, column 7, lines 21 – 23). The update server sends a setup program (instructions to update) to the program unit, which determines which files need to be updated (column 7, lines 228 – 56) with authentication (column 8, lines 15 – 19), but does not disclose a disk controller

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receiving the information comprising a DKC download controller, a program update controller, and a second program file. However, Murata discloses a configuration of a disk controller of a plurality of disk controllers comprised of a DKC download controller (e.g. Figure 12, ref. No. 20”), a program update controller (e.g. Figure 12, ref. No. 215 service processor) and a second program file being the control file. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the remote console downloading in the teaching of McGuire with the teaching of Murata having a disk controller program upgraded through an SVP from a maintenance panel, because the maintenance panel of Murata would be replaced by the remote console as taught by McGuire providing a remote upgrade capability for the disk controllers over a public network.

**In regard to claim 31, incorporating the rejection of claim 30:**

*“...wherein the second program file receives the update from the first program file.”*

McGuire discloses a server coupled with a client that stores and executes the software package (the program unit) via a network (e.g., see Figure 2), which may be the Internet (a public network, column 7, lines 21 – 23). The download server sends a first file to update a second existing file (e.g., Figure 7).

**In regard to claim 32, incorporating the rejection of claim 31:**

*“...wherein the update is received by the second program file independent of an associated DKC download controller.”*

McGuire discloses a server coupled with a client that stores and executes the software package (the program unit) via a network (e.g., see Figure 2), which may be the Internet (a public network, column 7, lines 21 – 23). The download server sends a first file to update a second

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existing file (e.g., Figure 7) in determining which files need to be updated (column 7, lines 24 – 56) with authentication (column 8, lines 15 – 19), but does not disclose a DKC download controller. However, Murata discloses a configuration of a disk controller of a plurality of disk controllers comprised of a DKC download controller (e.g. Figure 12, ref. No. 20”), a program update controller (e.g. Figure 12, ref. No. 215 service processor) and a second program file being the control file that is updated independent of an associated controller via the SVP. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the remote console downloading in the teaching of McGuire with the teaching of Murata having a disk controller program upgraded through an SVP from a maintenance panel, because the maintenance panel of Murata would be replaced by the remote console as taught by McGuire providing a remote upgrade capability for the disk controllers over a public network.

10. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over McGuire et al., U.S. Patent 6,493,871 in view of Ross et al., U.S. Patent 5,553,139 (hereinafter referred to as Ross).

**In regard to claim 22**, incorporating the rejection of claim 21:

*“...wherein said request further comprises, a product type, product serial number, and a control program version.”*

McGuire discloses that version information is considered in the software updating (column 4, lines 21 – 27), but does not disclose a request for product type and product serial number. However, Ross discloses a request for version, product type and product serial number for a software product license enablement (column 7, lines 32 – 46). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the McGuire

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invention to include product type and product serial number with the version number as taught by Ross when selecting software product upgrades, because this information is useful in verification of the proper products or modules to be updated as taught by Ross (column 7, lines 36 – 38).


***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Shrader whose telephone number is (703) 305-8046. The examiner can normally be reached on M-F 08:00-16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence Shrader  
Examiner  
Art Unit 2124



TODD INGBERG  
PRIMARY EXAMINER

February 19, 2004